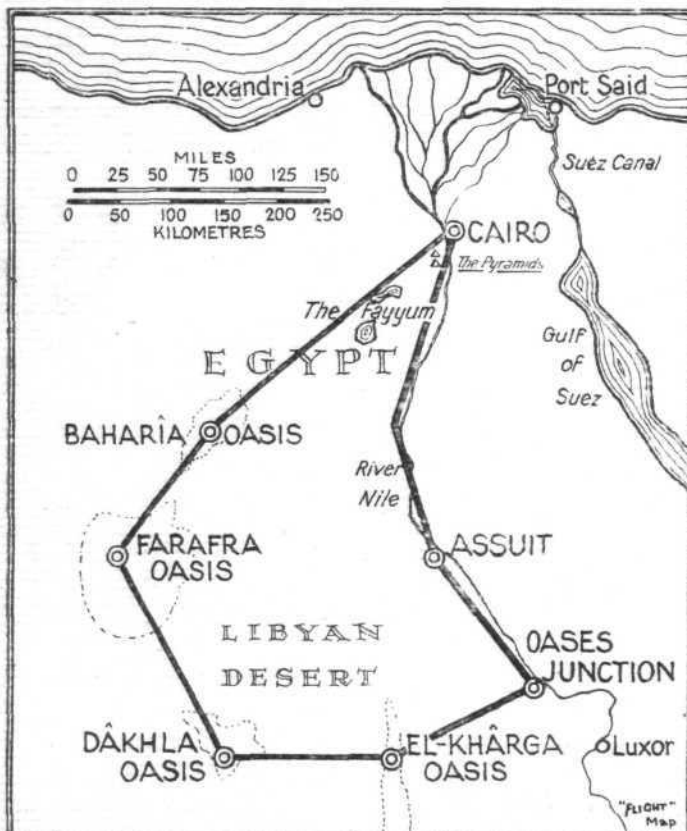




TANKING : Filling up the "Fox Moth" of M. Guy Hansez with "Shell." (FLIGHT Photo.)



THE CIRCUIT OF THE OASES : The first day's flying took the competitors via Assiut, Oases Junction, and Kharga to Dakhla, where the night was spent. The return flight was made next day via Farafra and Baharia.

difficulty in reaching the "Swift," and of the extreme cold at that altitude, decided to take off with Hassek Eff. in the 626 as well as his own passenger. Despite the nature of the ground this take-off was successfully accomplished, and for the present at any rate the "Swift" was abandoned. This incident shows that a forced landing could have had serious consequences. Had, for example, several machines come down, they would have had to be dealt with in rotation, and their rescue, therefore, possibly delayed quite considerably.

The other mishap was of a very minor nature, and only consisted of a competitor, M. Fremont, standing his Caudron "Phalene" on its nose, and damaging the airscrew at Baharia. A new airscrew was flown to him the following morning, and he returned to Almaza without difficulty.

The Circuit was arranged to start on Wednesday, December 20, but Egypt's weather, which has a name for constancy, decided for this occasion to be thoroughly feminine. It was capricious to a degree previously unknown, and very nearly, so to speak, wrecked the whole party.

Everything was ready, practically all the aeroplanes had been put through their preliminary tests, but at 7.0 a.m. it was evident that a Hamsin wind was doing its best to make flying conditions very bad. The start was, therefore, delayed for one hour. At the end of that period, however, the wind was worse, and the desert dust

was rising everywhere. Flying in weather of that kind can, besides being very unpleasant, be dangerous, so the authorities had reluctantly to cancel everything for that day.

The following morning, Thursday, the weather showed a better temper, though it was still blowing fairly hard, and from the south-west, a direction which all the visitors were constantly assured was almost unheard of at that time of year. Anyhow, it was fit for flying, and at 7.30 a.m. the first machine, No. 4, M. Bedel's Caudron "Phalene," painted in brilliant blue and orange, took off. Incidentally the colouring of the French aeroplanes was a feature of the meeting. Those which have, during the past few years, visited England, have for the most part been of the more sombre hues favoured by our own pilots, but these Caudrons and Farmans, coming in most cases from Algeria and North Africa, looked more like a flock of African macaws than anything else. Bright and cheerful, it is true, but not artistic.

Certain of the aeroplanes listed last week did not start



REDUCING TAXYING : A rubber-tyred "Shell" refuelling wagon. (FLIGHT Photo.)



LOOKING AFTER COMPETITORS : The cheerful staff of the Socony-Vacuum ready for attending to the replenishing of tanks. (FLIGHT Photo.)

TO THE LAST DROP : Measuring the fuel left in the tanks of one of the Farman machines.
(FLIGHT Photo.)



for various reasons. In some cases it was a question of insurance, in others the pilot was ill—possibly with what is colloquially known as Gippy Tummy—and of those who arrived the following left for Assiut in this order:—Nos. 4, 9, 5, 18, 19, 24, 21, 8, 12, 6, 13, 23, 11, 17, 15, 14, 26, 20, 16, 22, 29, 27.

The wind was still coming from the W.S.W., but had died down to about 15 m.p.h. The visibility was reported as good—and proved so by the pilots on their return the following day. So Egypt regained something of her reputation for attractive winter weather, although very little sun was to be seen on that or many of the following days, in Cairo itself.

The first day's flight was from Almaza to Dakhla. They had an interesting route. Soon after leaving Almaza they passed the Step Pyramid at Sakkara, with the Dashur Pyramids a little to the south but visible to the right of the course. Then they passed Lake Karoun, in the midst of the green trees of the Fayoum. After they reached the turning point at Matakusha the first feature of interest was the excavations at Tel el Armarna and then the course ran along the Nile to Mangabad, the Egyptian Army aerodrome at Assiut. Here a landing was made for refuelling and then competitors took off across the desert, towards the Oases rarely seen by Europeans. The green cultivation of the Nile Valley disappeared and below them was the dun coloured monotony of the desert, monotonous from a height of 2,000 ft. but strangely varied on the surface. Shortly before reaching the Oases Junction the ruins of Abydos, believed to be the oldest in Egypt, were passed, and then the Temple of Hibis, before Kharga, turning point

or voluntary landing ground, appeared. In the afternoon the competitors reached Dakhla Oasis, where green palm trees and little lakes of shining water stood out with startling clarity from the desert.

The night was spent in camp at Dakhla, in one of the remote oases in Egypt, where the Bedouin who live in the district crowded round, amazed to see so many and so brightly coloured aircraft descending to shatter the tranquillity of their life. The volunteer helpers who had journeyed out to the Oasis by car some days before did all in their power to meet the airmen's requirements, and, despite the difficulties of distance and inaccessibility, the arrangements were excellent, and all necessities and a good many comforts were provided.

After the competitors already enumerated had left Mr. G. Robson followed them round in his "Gull" (Napier "Javelin"). He had only arrived after the official closing time for entries, but had been allowed to go round as a non-competitor. His doing so was the cause of an "incident." Near Dakhla, about 20 km. beyond the



TALKING IT OVER : Mr. J. Shand (right) and Col. W. B. Beatty (members of the Committee) in conversation with the French pilot, Robert Brill. (FLIGHT Photo.)



CONSULTING THE MAP : Mr. and Mrs. Ahmed Salem before the start of the Circuit of the Oases. (FLIGHT Photo.)



THE DROP OF THE FLAG : Sqd. Ldr. Soden starting in the High-speed Race. His masterly flying was a feature of the tests before the Circuit.

(FLIGHT Photo.)



WATCHING THE FINISH OF THE SPEED RACE : Mrs. Bromet, Mrs. Buss, and Miss Woodley, with Wing Com. K. C. Buss. (FLIGHT Photo.)

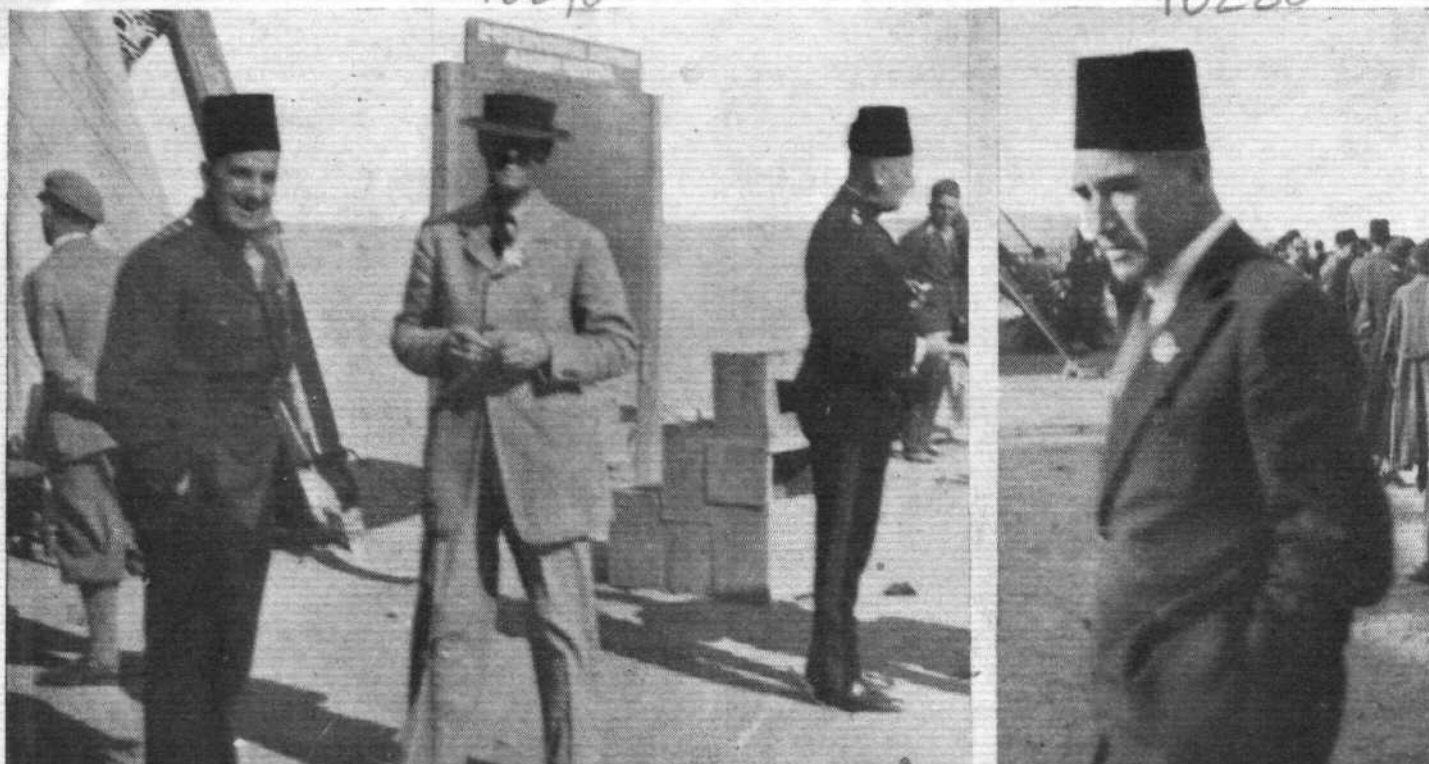
point where Hassek Eff. made his forced landing, and on the same escarpment, Robson's fuel supply stopped owing to an airlock caused by changing from one tank to another. Luckily for him he had a reasonable amount of

speed were those who did best under these headings, and naturally the greater number of passengers they carried the better.

The actual end of the Circuit was somewhat devoid of



BEFORE THE SPEED RACE : Left to right, S. Cliff, "E. J.," Sqd. Ldr. F/O. Soden, and Miss Woodley. (FLIGHT Photo.)



ORGANISERS : Kaimakam V. H. Tait Bey, Commandant of the Egyptian Air Force, Mr. J. L. Shand, and Russell Pasha, Chief of the Egyptian Police, all of whom worked hard to make the meeting a success. On the right, Sir Quintin Brand, Director-General of Aviation. (FLIGHT Photos.)

real interest. Owing to the fact that carefully checking of all the weight carried and the fuel remaining in the tanks had to be made, the officials did not allow anyone other than those actually engaged on these tasks to approach the machine park. It was not, therefore, possible to get either photographs or pilots' impressions as soon as they landed. They all arrived, at intervals, and only, as already explained, M. Fremont's machine fell by the wayside.

There yet remained the speed race, which was being held the following day, and certain of the competitors had to complete the preliminary tests. The Savoia Marchetti had, for example, to make its landing and take-off on the Nile, being an amphibian, and this it did after the race, with unfortunate results. Apparently it slewed badly on landing and seriously damaged a wing-tip, with the result that it was unable to complete the prescribed tests and was subsequently disqualified. An unfortunate result, because this machine caused quite a large amount of interest. It was fast and beautifully made, but the speed appeared to have been obtained by sacrifice of landing speed. Despite fitting a form of Zap type flaps the take-off was not impressive, especially from hot desert aerodromes. The Safety Factor test very definitely favoured multi-engined machines, as they only had to maintain height with one engine switched off for 12 minutes to gain full marks. Both the Spartan "Cruiser" and the "Dragon" had no difficulty whatsoever in doing this,

and it was, therefore learnt with regret that the "Cruiser" was unable ultimately to take part in the Circuit.

Saturday was brilliant but gusty when the Speed Race started at noon.

The start of the race was without incident. There was no unanimity as to which way to turn after taking off, but most made a half-turn to the right as the course lay at 90 deg. to the starting line in that direction. An ingenious arrangement had been evolved by Flt. Lt. Little, who with many other R.A.F. officers had taken some of their leave during the period of the meeting and volunteered their services. There is no doubt that the smooth running of everything on the aerodrome was due to Flt. Lt. Little and his band of marshals.

The starters were divided in groups between flags of various colours along the whole length of the starting line—which, as it was Almaza aerodrome, means umpteen metres long. Each group was given a starter, who acted independently of the others, so there was never any occasion for competitors to have much cause for worry due to starting at the same time as the machine alongside them. This removed hectic heart beats from the spectators!

The loss of performance in this part of the world was very evident in a start like this, and even old hands at the game like Sqd. Ldr. Soden took no undue risks with climbing turns of the kind one frequently sees in England.

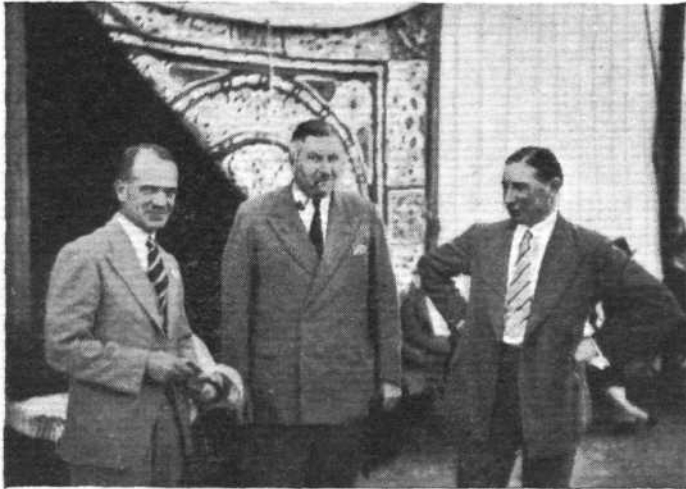
The first machine back was M. Maillet's Potez, but it was soon realised that he had dropped out of the race.



ALL-FRENCH : M. J. Puget and his Salmson-engined Farman, winners of the Speed Race. (FLIGHT Photo.)

10273^s

A WINNER : Mr. W. D. Macpherson, pilot of Mr. Lindsay Everard's "Dragon," who won the Circuit of the Oases, is seen removing the rags which have to be used for keeping out the fine dust. (FLIGHT Photo.)



DISCUSSING THE CHANCES : Mr. Green, Chief of the A.I.D. in Egypt, Mr. Lindsay Everard, and Sqd. Ldr. F/O. Soden.

10288^s

THE AVRO 626 ("LYNX") : Flt. Lt. Pope and his passenger just before the start of the Speed Race. (FLIGHT Photo.)

10257^s

A TAKE-OFF TEST : M. Bedel in his Caudron "Super-Phalene" (Bengali). (FLIGHT Photo.)

and it was not until half an hour later that the first machine which had completed the whole course came in sight. M. Maillet's trouble was later reported as a leaky fuel tank. Actually the first machine, a "Moth" piloted by Mlle. Lotfia el Nadi, Egypt's first lady pilot, with Mr. Carroll, Misr Airwork's chief instructor in the front cockpit, was reported as having been seen circling away time some mile or so from the aerodrome for many minutes before she actually arrived over the starting line. This naturally caused much talk, but reference to the rules will show that there is nothing against this procedure. The handicaps were based on a declared speed, with the proviso that the declared speed must be accomplished by the manufacturers' published statement in agreement. Furthermore, a competitor who exceeded that speed by more than 2 m.p.h. during the race was to be disqualified. Therefore there was nothing at all against a competitor doing a little skilful stop-watch work, waiting within sight of the aerodrome, and coming across the line at the right time. On the face of it Mlle. Lotfia appeared to have some time in hand, but unfortunately her luck and skill in this direction availed her nothing, as she missed a turning point on Dakhla aerodrome, at Alexandria, and was subsequently disqualified, much to the quite understandable disappointment of the Egyptians, who had all rejoiced to see their countrywoman win. One minute after Mlle. Lotfia, came M. Puget in his Farman 234, and he has now been declared the winner, with M. Guy Hansez, the popular Belgian pilot, who is so well known in England and who flies a "Fox Moth" which at one time belonged to the Prince of Wales, second, and M. Leon Challe, Caudron "Phalene," third.

Thus the Egyptian flying meeting ended, and in the evening was rounded off by a dinner given by the Aero Club of Egypt, under the chairmanship of Mohamed Taher Pasha, the President of the Aero Club of Egypt.

10278^s

"WAITING FOR SOMETHING TO TURN UP" : Egyptian Police during the absence of competitors on the Circuit of the Oases. (FLIGHT Photo.)

Air Transport & Commerce

AIR TRAVEL IN THE UNITED STATES

MR. GORDON ENGLAND, in a talk to members of the Press at Caxton House on Thursday, December 21, gave some interesting impressions on flying in the United States. In company with Mr. A. L. McColl and Mr. H. Holliday, Joint Managing Directors of Vacuum Oil, he has just returned from examining the economic situation in America.

In general, Mr. Gordon England gave the impression that he considers we in Great Britain have something to learn from the other side of the Atlantic concerning the running of air lines. The American companies study the comfort of their passengers from a psychological point of view. For instance, Mr. Gordon England was very struck with the "hostesses," their attractive green uniform, and the fact that they were always ready to do everything for the convenience and comfort of passengers. Refreshments of a light nature, such as coffee, chocolate, and iced drinks are supplied free of charge. No instruments are exposed in the cabin, as it is thought best to keep passengers ignorant concerning the height at which the machine is flying, and the speed thereof, but, inconsistently, passengers are informed if bad weather is likely to be encountered.

Mr. Gordon England then gave an account of a flight which he did in a Boeing 247 of United Air Lines between New York and Chicago, the flight being made during the night. He was collected at his hotel by a very comfortable Cadillac five-seater car. The checking of his ticket, weighing of baggage and other necessary formalities were over in just about 2 min., and there was a comfortable waiting room in which one could sit until the machine was due to leave. As soon as the cabin of the machine was entered a notice flashed up informing passengers that they must not smoke and that "seat belts" must be fixed; incidentally, the use of the term "safety belt" is religiously avoided, also for psychological reasons. As soon as the machine had reached a reasonable height the undercarriage was drawn up by electrical gear with more noise than would be expected. Permission was then given for smoking—cigarettes only, which were supplied by the company free of charge. The hostess went round taking orders for refreshments, and supplying pillows, papers and periodicals. When about to land, notices were again flashed up ordering the donning of "seat belts," and Mr. Gordon England particularly took notice of the fact that the pilot avoided doing steep turns while gliding in to land. On the return journey a landing was made at Cleveland in a snow-storm with the aid of a beacon with a shadow bar, akin to the one in use at Heston. Here again the arrangements were good. Passengers were presented with cheques for the unexpired portion of their fares and informed that lower sleeping berths had been booked for them on the train.

There is an hourly service between New York and Chicago, and if the passenger demand is great enough, it is increased to a half-hourly service; machines do not leave between 09.30 p.m. and 06.30 a.m. On the average there is more demand for the night service. The journey is made in 5 hr. 30 min., compared with the

20 hr. taken by train, and there is not much difference between the Pullman rail fare and the fare by air. In the air the cabin of the Boeing 247 is reasonably quiet, though not as quiet as the cabin of one of the latest types used by Imperial Airways. The ventilation was also good.

The pilots are all experienced men. Before each flight each pilot and the company's manager are required to study the weather reports from all along the route, and sign a chit stating that they are satisfied the conditions are good enough for the flight to be made. In the air they have to report by wireless every 20 min. The cruising speed of the Boeing 247 is, according to Mr. England, in the region of 170 m.p.h., and a new machine is being built which should cruise at nearly 200 m.p.h.

THE DUTCH AIR MAIL RECORD

AT 9.40 last Saturday evening, December 30, the thousands of watchers crowded on and around the aerodrome at Schiphol, Amsterdam, heard the drone of the engines of the record-breaking *Pelikaan* in the air above them. A dense mist made landing a difficult—at one time, indeed, it was feared an impossible—task, and it was not until 10.14 that the machine came to rest amid the cheers of the vast assemblage.

So ended what is indisputably the greatest flight in the history of Dutch commercial aviation, and one which the air services of other nations may well envy. The feat appears even more remarkable when it is remembered that both the Dutch machines which were to have attacked (in fact, if not in theory) the East Indian record were successively put out of action within a few days of each other—the *Pander Postjager* by the failure of a motor soon after the beginning of its attempt, and the *Fokker Zilvermeeuw* by a motor defect which prevented her from taking off.

The *Pelikaan*, which, when suddenly called-upon to perform the seemingly impossible in defence of Dutch aerial prestige, "rose" so nobly to the occasion, is one of the five Fokker F.XVIII's which the K.L.M. have been using with a success which has grown almost monotonous on the East Indian route since the end of 1931. Its three Pratt & Whitney "Wasp" (type C) 440-h.p. motors give it a nominal speed of 125 m.p.h., although the actual cruising



AN AERIAL SLEEPER: The sleeping accommodation provided by Eastern Air Transport on one of their Curtiss "Condor" airliners.



THE DUTCH AIR MAIL RECORD: The K.L.M. Fokker ~~P.H.V.H.I.~~ *Pelikaan*, snapped during its brief halt at Almaza, Cairo, during its record flight from Amsterdam to Batavia. (Flight Photo.)

speed of the *Pelikaan* is at present slightly lower. The tanks, built, after the usual Fokker manner, into the wings, carry 2,010 litres of fuel. During its brief sojourn at Batavia between the two record flights the *Pelikaan* was fitted with an extra tank to give a radius on the return journey slightly greater than the normal 950 miles. Dead and useful weights of 4,350 and 3,200 kg. respectively give a total of 7,500 kg., or about $7\frac{1}{2}$ tons.

The *Pelikaan's* return flight from Batavia to Amsterdam occupied 4 days 4 hr. 35 min., or a few minutes less than the record outward journey. It is no secret that the pilots had hoped to reduce the time considerably, but head winds, and finally fog, intervened to disappoint them. Nevertheless, their achievement is one of which the K.L.M. and the Dutch nation in general may well be proud, as reports from Holland indicate is, indeed, the case. The news that the crew of the *Pelikaan*—Messrs. Smirnoff, Soer, Groszveld and Van Beukering—are to be decorated with the Order of Orange-Nassau has given great satisfaction, and it is understood that they will be the recipients of many private tokens of appreciation. A "*Pelikaan*" fund has been opened to commemorate the flight, and will be devoted to the furtherance of national aeronautical progress in Holland.

The flight is indeed a magnificent New Year present to a very deserving country.

THE BOMBAY-CALCUTTA SERVICE

IN our leading article of December 21, 1933, we gave some extracts from an address made by Capt. Tymms, Director of Civil Aviation in India, to the Railway Conference at Simla. In it allusion was made to a service between Calcutta and Bombay, for which it was expected that the firm of Tata would tender. We are now able to give details of the offer made by the Tata firm to the Government of India. Its salient points are as follows:—

The service will be operated once daily in each direction throughout the year. The route will be direct between Bombay-Nagpur and Nagpur-Calcutta. The actual timings will depend upon the ground organisation available, but in any case the departure from either terminus will be after midnight and the arrival at the other end will be scheduled before midday, so that letters posted the previous evening will be delivered at destination in the early afternoon.

The company asks no subsidy or financial aid from the Government, but desires payment at the rate of Rs. 3 (three rupees= 4s. 6d. at current rates) per lb. of letter mail carried on the service. In view of the considerable capital layout and organisation required, the minimum period for the contract should not be less than 15 years, with an option of renewal on terms to be agreed upon before the expiry of the first contract.

The offer is made subject to the following conditions: (a) that all letter mail travelling between Bombay, Nagpur, and Calcutta, whether posted at or beyond any of these three cities for destinations on or beyond the route, shall be entrusted to the Tata air service for carriage.

No letter, therefore, should travel between Bombay, Nagpur and Calcutta except by air.

This is a fundamental condition, without which the terms offered would be impossible.

(b) The company further stipulates that landing grounds which can be used safely in any weather conditions all the year round by heavy aeroplanes shall be provided at Bombay, Nagpur, and Calcutta, and that two emergency landing grounds be made available between Nagpur and Calcutta. The route must also be equipped with two-way wireless telephony and with directional wireless. Facilities for landing at night must be provided at Bombay and Calcutta.

Tata Sons, Ltd., will be prepared to start this service one year after the Government's approval has been received, if suitable existing equipment is available, or within 18 months if aeroplanes have to be specially constructed or modified for the purpose.

That is the offer. We may recall that Capt. Tymms said that this route would be the heaviest traffic-bearing airway in India, as it would connect the two largest and most important cities. He said that the route must be operated by a mail-carrier with a normal cruising speed of 175 m.p.h., with a load of 1,000 lb. of mails, and a flight endurance of 1,250 miles. He estimated that five machines would be needed to keep the service going. The flying length of the route is 1,050 miles.

If the Tata offer is accepted, it will mark a very great advance in air mail practice in the British Empire, for it will establish the principle of sending all letter mail between two first-class cities over 1,000 miles apart by air. When the United States started its air mail service between New York and San Francisco it sent mail matter by air at its own discretion, without consulting the senders or making a special charge for the faster transport. But it did not follow that all letter mail was therefore sent by air. The principle that all first-class mail matter must be sent by air is one which has for long seemed an ideal, though an ideal not easily to be attained. The Tata firm are now making it the basis of their offer, a *sine qua non*. It is a proposition of the utmost interest and importance, and we shall eagerly await the reply of the Government of India to this offer.

MUREAUX FLYING-BOAT FOR AIR-FRANCE

A TWIN-ENGINE Mureaux flying-boat with Hispano-Suiza engines is at present being assembled. Test flights will soon be made. The machine has been built for the Mediterranean services of Air-France.

A FRANCO-CZECHOSLOVAKIAN AGREEMENT

On the merging of C.I.D.N.A. Company into Air-France, a new agreement between France and Czechoslovakia was necessary. The Czechoslovakian Government owned important interests in the C.I.D.N.A. Company. The text of a new arrangement was signed on December 12. M. Pierre Cot signed for France. The Czechoslovak Republic was represented by M. Osusky, the Czechoslovakian Minister in Paris, and M. Roubik, the Czechoslovakian Director of Civil Aviation.

A NEW CZECHOSLOVAKIAN LINE?

We gather from an unconfirmed report that an air service between Prague, Geneva and Marseilles will be put into operation next year by Czechoslovakian interests. It is stated that the machines to be used will be Avia 51's. The 51 is a new five-passenger aircraft with a high cantilever wing and duralumin monocoque fuselage. Three 200-h.p. Avia R.12 engines are fitted and a top speed of 164 m.p.h. and a cruising speed of 144 m.p.h. is claimed for the machine.

From the Clubs

LONDON AEROPLANE CLUB

Fog has prevented much flying being done during the past fortnight. The Christmas Turkey Lunch on December 17 was a great success. Com. Perrin, in a speech, expressed the hope that the enthusiasm and cheerful spirit which had been such features of Stag Lane would continue at Hatfield.

Flying hours for the year totalled 2,285 hr., which is not quite up to last year's total, but the inconvenience caused by the move to Hatfield must be taken into account. The Club is now much more prosperous than it has ever been before. It has a complete new set of machines, three "Gipsy II's," two "Puss Moths" and a "Gipsy Major," a "Tiger Moth" will shortly be added to this list. During the summer Mr. Nigel Tangye left to join the Aviation Section of the A.A. and Mr. W. F. Rimmer took his place. Mr. Rimmer is now at Heston. Maj. Travers, the Chief Instructor, left when the Club moved to Hatfield, and Mr. J. A. Harris took his place, with Mr. G. R. de Havilland as Second Instructor. The Club have gained 25 "A" licences and seven "B" licences during the year.

THE NORFOLK AND NORWICH AERO CLUB

The Club are in the happy position of being able to state that the year 1933 has been entirely free from accidents to either aircraft or personnel. A gala dance will be held at the Club at 8.30 on Friday, January 5, Howards Dance Band providing the music. Tickets, which include supper, can be obtained from the Secretary at a price of 3s. 6d. Soloists during the last week were Messrs. H. Birchall, H. C. Stringer, A. J. S. Morris and W. O'Brien.

SOUTHEND FLYING CLUB

Activities at Rochford Aerodrome have been chiefly confined to the ground during the Christmas period. An enjoyable clubhouse supper was held at which members provided their own entertainment. Mr. Watson amused with humorous monologues and Mr. R. R. Bentley sang. Eighty children from the neighbourhood enjoyed the Christmas party and received presents from a large tree. Flying visits were undertaken to Gravesend and seasonable greetings exchanged. Several taxi flights were flown, including one to Margate. Messrs. Deavin, Garland and Ballard have obtained "A" licences.

BROOKLANDS

As a result of fog only 25 hr. dual and 30 hr. solo have been recorded during the past week. Mr. Lawrence was able to carry out a very successful first solo and Messrs. Morris and Pickar tests for "A" licences. There is one new member, Mr. Fountain. Mr. Lowdell has been doing some tests on the Comper "Mouse." Capt. Findlay went to Bedford to inspect Mr. Shuttleworth's new aero-

drome at Old Warden in preparation for its being licensed by the Air Ministry. There is available at this landing ground a ground engineer, a hangar, a telephone, and the surface and approaches are admirable.

READING AERO CLUB

The Berks, Bucks and Oxon Aero Club, until recently run by National Flying Services, has been merged with Reading Aero Club, Mr. Milne, their instructor, joining the Phillips & Powis School of Flying. Among new pupils and members are Col. Hesketh, Messrs. Woodhouse, Hicks, Barrett, Armitage and Grundy. Miss Frost and Mr. Ruddle have left in the former's "Gipsy I Moth" for a tour of the Continent. Another new "Hawk" owner is Mr. G. L. Harrison, who took delivery during the week-end. The "Hermes Hawk" of Mr. Singh has a range of 2,000 miles, a cruising speed of 140, and a top speed of 160 m.p.h. It climbs to 10,000 ft. in 9 min. 25 sec. Extensive tests have been carried out with two-thirds full load, and the machine behaved perfectly normal; when carrying full load the machine carries more than its own weight.

CARDIFF AEROPLANE CLUB

The flying times for the two weeks ending December 31 totalled 3 hr. 5 min. dual, 15 hr. 5 min. solo and 1 hr. 15 min. tests. There is one new flying member, Mr. J. D. Neale.

THE YORKSHIRE AEROPLANE CLUB

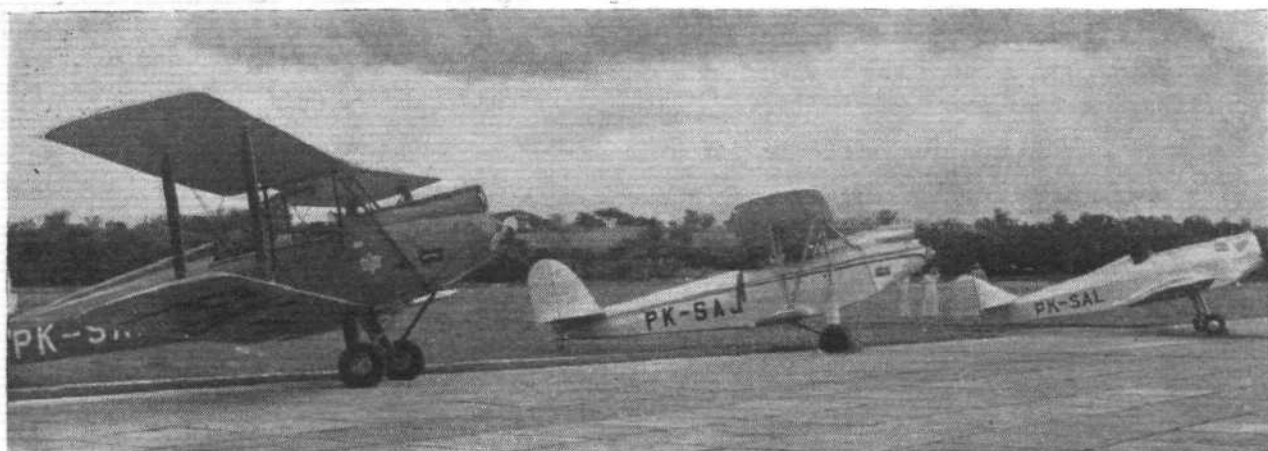
Thick fog stopped flying on most days the last two weeks, only 9 hr. having been flown on Club aircraft. Mr. R. Watson and Mr. L. B. Patrick, the *Daily Express* pupil, have passed tests for "A" licences. Santa Claus landed at Yeadon on Christmas Eve and presented gifts to children.

LANCASHIRE AERO CLUB

On Boxing Day the Quarterly Junior and Senior Landing Competitions for the Pemberton and Rodman Trophies, respectively, were flown off. An alteration was made in the rules, points were awarded for the distance from a given mark after crossing the tape to the final stopping point, instead of the distance from the tape itself. The mark was placed 175 yd. beyond the tape. Twenty-two competitors took part, and the judging was in the capable hands of Mr. R. H. Dobson and the instructors. In spite of the calm weather, the performances in the junior class were not of a very high standard. The winner of the Pemberton Trophy was Mr. Gregory, with a score of 55 out of a maximum 80 points. In the senior competition the results were of a much higher standard, though the failing light added to the difficulties of the later competitors. Mr. F. R. Hall was the winner with a total of 79 out of a possible 80 points. Mr. A. Goodfellow scored one-fifth of a point less. Mr. P. T. Eckersley was a



AN ITALIAN SAILPLANE: Ugo Zannier, a young Fascist flyer of Gemona, Northern Italy, has built a new sailplane, on which he made a splendid flight recently. Launched from the top of Mount Quarnan, 1,372 m. high, he remained aloft for 11 hr. 37 min.



FROM THE DUTCH INDIES: The first Miles "Hawk" (extreme right) put into service at the Sourabaya Aero Club, where it is giving great satisfaction.

good third with 72 points. The message-dropping contest was won by Mr. Turner. Mr. G. Yuill, being Scottish, is taking his holiday over the New Year and Mr. Colin Wilson, the voluntary assistant instructor, has very kindly offered to take charge during his absence.

The month's total flying again shows a substantial increase over the flying time for the corresponding period of last year. New "A" licences have been obtained by Mrs. Templeton, Messrs. Stone, Belgrave, Watkins, Robinson, Green and Horrox, and a first solo was carried out by Dr. Simpson. Members are reminded that there is available an "Avian" fully equipped for tuition in "blind" flying. The annual ball was an unqualified success, over 300 members and friends attending. Sir John and Lady Siddeley acted as host and hostess. Capt. Burgess is still under medical care but is progressing well, and it is hoped he will soon be back. The Club have pleasure in welcoming Miss M. MacDonald and Mr. E. W. Ruggle.

LONDON-BRIGHTON ROAD AERODROME

The London & Provincial Aviation Co. have acquired 116 acres of ground at Bolney, on the main London and Brighton Road, with the object of developing it into a civil aerodrome. The situation of the aerodrome is claimed to be ideal, there being no obstructions and it being out of the fog area. Plans have been passed for the erection of a steel and concrete clubhouse, hangars and public enclosure. The company intend to give tuition in flying, run an air taxi service, and provide all facilities for visiting pilots.

LIVERPOOL AND DISTRICT AERO CLUB

The flying times for the fortnight ending December 29 totalled 13 hr. 15 min. dual and 8 hr. 55 min. solo. The month's total is 63 hr. Fog has prevented flying considerably. The annual ball was held at the Grosvenor Hotel, Chester, on Friday, December 29, when about 150 members and friends spent a most enjoyable evening. The opportunity was taken to present to Maj. R. H. Thornton the presents subscribed for by the members of the Club on the occasion of his marriage. A machine and ground landing flares are now regularly available for dual and solo night flying, which takes place every Wednesday evening from 6.30. The Club's "Gipsy III Avian" was taken by the chairman for a week's tour of France during September, where it took part in the Bienvenue Aérienne, generously organised by the French "Pilotes de tourisme." During

October the Club's "Puss Moth" was flown to Bordeaux and back by a member accompanied by the chief instructor.

ROYAL NAVAL FLYING CLUB

The Royal Naval Flying Club is now entering on the third year of its existence. There are 205 members, of whom about 130 are home members. With the small income derived from subscriptions it has been possible to provide flying facilities with privilege of full membership at more than half a dozen light aeroplane clubs in Great Britain; to these clubs was added Portsmouth during the past year. The Hon. Secretary would like to appeal once again to all members serving at foreign stations to communicate with him on the possibility of arranging facilities with overseas clubs, especially those from the following stations: Singapore, Hong Kong, Bombay, Cape Town and the West Indies. The all-important question of cheapening the flying rates is receiving attention, and at a later date it may be possible in certain instances to reduce the current rates. The possibility of doing this depends, of course, on an increase of membership.

JOHANNESBURG AERONAUTICAL ASSOCIATION

After the breaking of the nine months drought private owners have been much to the fore. Club flying times totalled 46 hours, of which 15 hours 30 minutes were dual. Mrs. Armour Hall, who only recently went solo, quickly piled up 5 hours. Mr. Neale, additional Magistrate at Johannesburg, is taking dual instruction. There was one cross-country flight, to Barberton, by an old lady who declared that trains made her so ill that she wanted to travel by air. She enjoyed her trip immensely. The only civilian instructor in blind flying in South Africa, Mr. G. B. D. Williams, was recently compelled to travel by train for the first time in ten years.

THE BENGAL FLYING CLUB

The Bengal Flying Club reopened on November 12, when F/O. K. D. Knocker took over the duties of Pilot Instructor. Since flying started the machines have spent practically every available minute in the air, the flying times for the past three weeks of November being 41 hr. 10 min. dual and 46 hr. solo. There has been one cross-country flight, when three machines went to Maheshganj, the private landing ground of Mr. B. K. Das. Two successful first solos were done during the month by Messrs. A. H. Taylor and W. C. Bartley, and Messrs. F. Wolff, N. T. Cheine, N. Ukil Banerjee and A. H. W. Leonard received dual instruction.

Grading of American Pilots

THE pilots in the United States have up to the present been graded into three classes, Private Pilots, Limited Commercial Pilots and Transport Aircraft Pilots. It has now been decided to institute a new class below the Private Pilots, which will be known as the Amateur Pilots' class. In order to secure a licence for this new class an applicant will be required to have had 25 hours' solo flying, including at least 5 hours within 60 days before application. He must also pass examinations on the Air Commerce Regulations and air traffic rules and do a test flight which will be practically the same as that for a Private Pilot's licence, except that he will not be required to go into and recover from spins, neither will he be required to effect cross-wind landings and take-offs. A pilot

with this new licence will be allowed to pilot licensed aircraft, but he may not carry persons or cargo for hire unless he is in a dual-controlled plane and is accompanied by a licensed transport pilot. The medical examination will be the same as that for a Private Pilot's licence. Applicants for a Private Pilot's licence will in future be required to do the same test flight as prescribed for transport pilots, with the exception of the cross-country flight. Private pilots may now carry guests and employees of companies by which they are employed provided no payment is made for the flight. They may also demonstrate machines to prospective buyers. The general idea of this new class is to make the privileges of the people flying for pleasure as liberal as possible. And very laudable, but it all seems unnecessarily complicated.

Airisms from the Four Winds

A noteworthy Latvian flight

WE have previously referred to a flight from Riga to Africa carried out by a Latvian pilot, H. Cukurs, on a machine of his own construction. Further details published in *Shell Aviation News* indicate that this was a rather remarkable flight. His machine was a low-wing monoplane of semi-cantilever type, built almost entirely of wood, the only metal used being in the undercarriage and engine mounting. The wing tapers in thickness both at the tips and roots, and bracing is carried out by inverted V's from the top of the fuselage on each side. The engine is an 80-h.p. 8-cylinder V-shaped air-cooled Renault, built in 1916 and bought by Herr Cukurs for £2 from a dealer in old iron. Actually the engine had been salvaged from a British machine which was shot down near Riga during the war. With a cruising speed of 110 kilometres (68 miles) an hour, the Cukurs monoplane can climb to 3,000 m. (9,840 ft.) in 16 min., while the maximum ceiling is 5,600 m. (18,370 ft.). He left Riga on August 28, and on arrival in Paris he got into touch with the Renault works, who expressed considerable surprise to see the engine still working. It was overhauled and Herr Cukurs continued to Spain, but the machine was damaged in a forced landing near Barcelona. Repairs were effected, and although one cylinder failed to work after leaving Barcelona, Herr Cukurs managed to continue his flight to Alicante. Shortly after leaving that place, engine trouble developed again, and although the pilot was provided with a parachute, he preferred to turn his machine back in the direction of Alicante aerodrome, which was then approximately 20 km. (12 miles) away, and to land from a height of 2,000 m. (6,560 ft.). He failed to reach the aerodrome, but made a successful forced landing. It was then found on investigation that one cylinder was completely broken, while the others were damaged and the crankcase entirely wrecked. With the assistance of the local air force the engine was patched up and Herr Cukurs continued on his flight, reaching Tangier on October 20, Agadir on the 24th, Cape Juby on the 26th and finally Bathurst on November 3. When it became known in Latvia that Herr Cukurs had succeeded in reaching Gambia safely, the local aeronautical association decided to collect money for the purpose of presenting him with a new engine, so that he might return to Riga by air. A "Gipsy Major" engine has been purchased, and this is now on its way to Dakar, where Herr Cukurs arrived on November 9.

A Norwegian African flight

ACCORDING to *Shell Aviation News*, three Norwegian pilots, Lts. Skappel, Engnes, and Smith, propose to undertake a flight to Africa in three "Gipsy Moths" purchased from the Norwegian Army. The start is scheduled to take place at any moment, the three machines flying to-

gether as far as Nairobi, thence one continuing to Madagascar.

New French light plane record

ON December 26, at Istres Aerodrome (Marseilles), M. Delmotte established a new world's speed record for light planes in the second category (single-seaters weighing under 992 lb.), by covering a distance of 1,000 km. (621.37 miles) at an average speed of 332.183 km./h. (206.41 m.p.h.). The machine he used was the Coupé Deutsch Caudron C.362 fitted with Renault Bengali special engine. The best speed over 500 km. was 333.506 km./h. (207.24 m.p.h.), and over 100 km. the best speed was 334.666 km./h. (207.54 m.p.h.). On a previous attempt Delmotte ran out of petrol after flying 940 km. He was flying at 150 ft. at the time his engine stopped, but by using his great speed to do a "zoom," he found time to work his wing camber gear, and landed without breaking anything, although the field was very rough. The machine was fitted with a Ratier airscrew with variable pitch, which is considered to have contributed materially to the success. The low pitch at the start resulted in an amazing take-off, the machine being away in 15 sec., although loaded to more than 20 lb./sq. ft.

Lost French airman

THE fragments of an aeroplane, which were washed up on the beach near Dungeness, have now been definitely established as parts of the machine in which the Viscount Manneville lost his life.

Canadian aeroplanes' rescue work

A STORY comes from Canada of lives saved by aeroplanes. The Canadian Trading Schooner *Speed* was wrecked by an engine-room explosion during an arctic storm in the Great Bear Lake. Three survivors were stranded, two of them half-blinded. Mr. W. N. Parker, the third survivor, walked 125 miles and, after six days, reached a civilised spot. On hearing his story two pilots, who happened to be in the vicinity, set out immediately with a doctor and food. In an hour and a-half the machines reached the two stranded men and brought them back to safety.

Another record for Italy

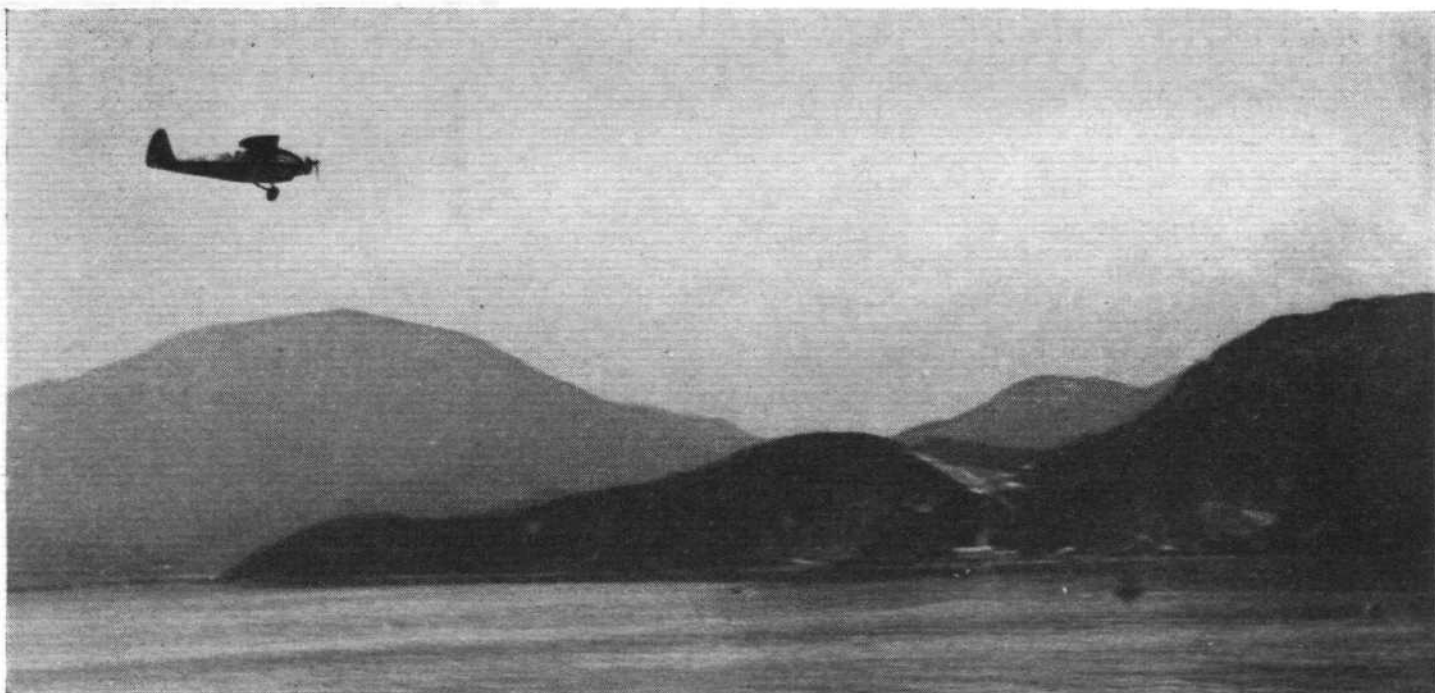
THE world's altitude record for light aeroplanes (second class) has been beaten by an Italian, Furio Niclot. He was in the air for three hours and attained a height of 32,090 ft. The previous record was held by Herr Waldemar Voight, a German.

Air raids on Foochow

FOOCHOW, the capital of the rebel Chinese province of Fokien, has spent a Christmas of air raids. Machines of the Chinese Nationalist Army bombed the city, and are reported to have been responsible for 45 deaths.



HOME AGAIN! : Col. and Mrs. Charles Lindbergh arriving at College Point, New York, at the conclusion of their 30,000 miles flight to Europe and back.



FAR FROM HOME : A British-owned Comper "Swift" ("Pobjoy") over the entrance to Hong Kong harbour.

Air raids in Turin

A FULL day and night's drill has been held at Turin. Military and Red Cross contingents all wore gas masks and were covered from head to foot in rubber overalls, specially prepared as protection against mustard gas. The population were also issued with masks. At dawn one of the streets was cleared of people and barricaded. A thick coating of chloride of lime and sand was spread about and the walls of the houses were sprayed with antidotes.

Endurance record

Two American women, Mrs. Frances Marsalis and Miss Helen Richey, are reported to have broken the endurance record. They stayed in the air for 237 hr. 42 min.

French flight to Saigon

THE new French three-engined Dewoitine, *Emeraude*, which recently flew from Paris to Morocco and back in record time, is reported to have arrived at Saigon in Indo-China. It carried mails from Paris and did the flight in 48 flying hours, at an average speed of 155 m.p.h.

A height record for France

A FRENCH pilot, by name Bourgin, claims the height record for machines carrying a load of a ton. He states he reached a height of just over 30,000 ft.

A French long-distance flight

Two French airmen, Capt. Bonnot and Lt. Jean Pierre, of the French Naval Air Service, left Etang de Berre, Marseilles, about midday on Sunday, December 31, in a Latecoere 30.1 flying-boat named *Croix de Sud*. The machine is equipped with four 650-h.p. Hispano-Suiza engines. They flew non-stop to St. Louis, Senegal, a distance of 4,000 km. (2,500 miles). The time taken for the flight was 22 hr. 23 min., which gives the flying-boat a cruising speed of about 114 m.p.h.; incidentally, it has been designed and built to carry mails between Africa and South America. This is a record long-distance flight for a seaplane. The previous record was held by Lt. Mermoz, who flew from St. Louis, Senegal, to Port Natal, in Brazil, a distance of 3,173 km.

Inverted flying record

ACCORDING to a report an airman, by name Milo Burcham, has set up a record for inverted flying; he remained upside-down for just over 4 hr.

Lord Londonderry's tour

LORD LONDONDERRY, Secretary of State for Air, who is making a 16,000 mile tour of R.A.F. units overseas, flew from Cairo to Wady Halfa on Wednesday, December 27. The next day he flew to Cairo, accompanied by Air Vice-Marshal Newall, stopping on the way at Bara, where his machine was re-fuelled. Five Fairey "Gordons" ("Panther") of No. 47 (B) Squadron flew out and met the party and escorted it on to Khartoum, where it was entertained by Mr. Bell, the acting Governor-General for two days at the Palace. At Khartoum, Lord Londonderry visited No. 47 (B) Squadron, and

during the week flew on to Amman to visit No. 14 (B) Squadron. From Amman he flew to Hinaidi, the aerodrome of Baghdad, in just over six hours. The units at Hinaidi are No. 55 (B) Squadron, equipped with the Westland "Wapiti" ("Jupiter"), and No. 70 (B.T.) Squadron, which uses the Vickers "Victoria" Troop Carrier (2 "Lions").

Air rescue in the Arctic

SOME time back the Russian ice-breaker *Cheliushin* set out on an expedition to the Arctic under the leadership of Prof. Schmidt. A few weeks ago it was reported that the ship had been trapped in great ice floes. Now, in response to urgent wireless calls from Prof. Schmidt, aeroplanes are being prepared to go out and rescue the members of the expedition. Some of these machines have been specially built for work in arctic regions.

More aerial rescues in Canada

THE intense cold of the Canadian winter is providing many instances of rescue work done by aeroplanes, and rescue work of such a nature as can only be done by aeroplanes. Here is one such incident. A trapper, by name Jim McAuley, trekked many miles through the snow to obtain medical aid for a sick friend, George Corston. As a result of his report an aeroplane set out, and within a few hours had brought the sick man to where medical aid was available.

Missions to Rome

A CHINESE military mission headed by Divisional General Yang Tse, Director of the Military School at Nanking, recently visited the Italian Air Ministry in Rome. In the "Common Messroom" of the Ministry, H.E. General Valle offered a toast in honour of the delegates.

Returning the visit of H.E. Air Marshall Balbo to Brazil in 1930, a Brazilian delegation headed by Minister Osvaldo Arenha will soon arrive in Italy.

A Fieseler machine for the circuit of Europe

HERR FIESELER is building an entry for the Circuit of Europe in his factory at Kassel. The aircraft is quite a new type, and has been specially designed for the competition.

Punctuality is the soul of business

DURING the recent bad weather, when gales blew all round the shores of Great Britain, the cross-Channel services were highly disorganised and quite a considerable amount of inconvenience must have been caused to individuals. Even the large trans-Atlantic liners were late in arriving. In spite of all this bad weather, however, Imperial Airways were able to maintain their scheduled services with very little discomfort and with no delay. Many people unable to cross the Channel by boat decided to travel by air instead, and applied to Imperial Airways, who were so inundated with applications that they were unable to cope with them all, and many applicants were turned away.

THE FEDERATION AERONAUTIQUE INTERNATIONALE

A LARGE and glittering throng witnessed the Official Inauguration of the Thirty-Third Congress of the Fédération Aéronautique Internationale, by H.M. King Fuad, at the Royal Opera House, Cairo, on December 20.

On the stage, when His Majesty arrived, were grouped the official delegates of the various nations, and the members of the Local Committee. In the front row sat the members of the Federation and the Presidents and Secretaries of the Local Committee. The Minister of Communications, Ibrahim Fahmy Kerim Pasha, who presided, was in the centre and on either side sat Prince Bibesco, President of the International Federation; Mohamed Taher Pasha, President of the Local Committee and President of the Aero Club of Egypt; Sir Quintin Brand, Vice-President of the Local Committee and Director-General of Civil Aviation; M. Paul Tissandier, Vice-President of the International Federation; Ahmed Mohamed Hassanein Bey, Vice-President of the Aero Club of Egypt; Kamel Eloui, Secretary General of the Aero Club; and Mohamed Bahgat Chimy Eff. and Guirguis Awadallah Eff., Secretaries to the Local Committee of Organisation. Behind sat the six Vice-Presidents of the International Federation.

Amongst those present were the members of the Diplomatic and Consular Corps, high officials of the Egyptian Government and leading members of the various communities in Cairo.

S. E. Mohamed Taher Pasha welcomed the delegates to the Congress, and Prince Bibesco, President of the F.A.I., replied on their behalf. In doing so he pointed out that this Congress was under the patronage of the same Prince Ahmed Fuad who had inspired the first Egyptian Aviation Meeting, which was held in February, 1910.

In the name of the Egyptian Government, the Minister of Communications then welcomed the delegates to Egypt, and in the name of the King declared the Congress open. The countries represented were: Great Britain, Germany, Austria, Belgium, Spain, United States, France, Switzerland, Greece, Hungary, Italy, Japan, the Netherlands, Poland, Rumania, Sweden, Czechoslovakia, Turkey and Yugoslavia.

Throughout the following week conferences were held to discuss the various questions in the agenda of the Congress. The result of the deliberations will not be available until some time after the close of the Congress.

Besides being present at the finish of the Circuit of the Oases at Almaza Aerodrome, the delegates were entertained at Soirées given in their honour by:—H.M. the King, the Minister of Communications, the President of the



M. Alexandre Comanos, General Secretary of the Royal Automobile Club of Egypt, and a Secretary of the Reception Committee for the Congress of the F.A.I. in Cairo, has been made a Chevalier of the Legion of Honour by the French Government. M. Camanos, who has devoted himself for many years to the cause both of motoring and flying, endeared himself to all visitors during the Congress by his helpful manner and by the way in which he made everyone welcome to Egypt. (FLIGHT Photo.)

the Aero Club, and the Governor of Cairo, and to a dinner given by the Aero Club. Apart from which, many excursions were arranged for them, and it is certain that, not only did they appreciate the way in which they were entertained, but that they will leave Egypt with the firm intention of returning as soon as possible.



The Soviet Aero-Hydrodynamic Institute

THE Joukovsky Aero-Hydrodynamic Institute, known as Zagi, has recently celebrated its fifteenth anniversary. The Institute was founded by Professor N. A. Joukovsky, the eminent Soviet aviation authority, and a group of young scientists. In cold unheated premises they began the work of designing "airsleds," gliders and aeroplanes, which have brought the Institute world fame. After early experiments, a small aeroplane was built and named "Lettish Marksman," which carried out a flight from Moscow to Peking. This was followed by a series of international flights. In 1926 the Soviet airman, Gromov, made a flight across Europe on the ANT-3 to test its possibilities for speed. The next plane, the ANT-4, made a 20,000-kilometre flight across Siberia, the Pacific Ocean and the American Continent, landing in New York. The Institute is now an immense organisation, occupying vast premises with numerous laboratories, equipped with the most modern apparatus. It has become an experimental aeroplane factory and testing station. In the fifteen years of its existence the Joukovsky Institute has developed into the biggest aeronautical research centre in the world. Col. Lindbergh, who inspected the laboratories of the Institute during his visit to Moscow, stated that he had not seen anything like them anywhere. M. Pierre Cot, the French Air Minister, and the group of aeronautical experts who accompanied him on his tour of Soviet Russia, were of a similar opinion. M. Herriot visited the Soviet Union last summer. He stated in a lecture delivered in Paris on December 20 that the Moscow Aero-Hydrodynamic Institute was an extraordinary scientific institution. "The

work of this Institute," he said, "has led to the creation of a school of designers which has largely been responsible for the high standard of the Soviet aviation industry. The Institute has produced a number of extremely valuable inventions which are of much importance to aviation." The Joukovsky Institute possesses one of the largest wind tunnels in the world in which a wind velocity of 100 m. per sec. can be created. All the scientific instruments used by the Institute are of its own design. Fifteen years ago the Institute began its work with 30 people; now the number of its workers runs into thousands.

An air-minded bull?

AN amusing story comes from India concerning a bull and a "Puss Moth." The "Puss Moth" landed in a field near Vasavad, about 40 miles south of Rajkot, and, owing to the soft nature of the ground, was unable to take off. With the aid of some local inhabitants, the pilot taxied into a field with a harder surface, and prepared to take off. Unfortunately, however, the field was already occupied by a bull, and, such is western influence, the bull believed that "An Indian bull's field is his castle." Not having time to consult Geneva, he decided on immediate action, relying on his own initiative to oust the intruder. Result—bull charges "Puss Moth," pilot starts to take off, bull more infuriated at attempted escape of enemy. A little later "Puss Moth" comes to rest much the worse for wear, and for the time being out of action (fact). Retirement of bull, satisfied that its position as an Indian bull has been worthily upheld (conjecture).

Airport News

CROYDON

THE end of the week, no less than the end of the year, was saddened for everybody, both British and foreign, at the Airport of London by the terrible disaster to the Imperial Airways' air liner *Apollo* in Belgium on New Year's eve. Mr. J. M. Gittins and Mr. H. G. Loch were officers well known and liked by all of us, and their loss will be keenly felt. Everyone who has to do with the practical side of air route operation during periods of fog will sympathise deeply with the management of Imperial Airways, Ltd., for no care and no attention to every tiny detail which can make for safety has been omitted by the company, and this disaster must be put down to sheer bad luck, and a bad luck at that which Imperial Airways, Ltd. have done nothing to deserve.

The tall wireless mast at Ruysselede was a necessity in the particular position it occupies, but this accident shows how monstrous it is to allow local authorities to erect tall power cable pylons all over the air routes without reference to the Air Ministry, as they have done in the past. I would also repeat what I said last week about the danger to air traffic in fog, of the radio-beacon mast on the aerodrome at Croydon. We have had one accident owing to a tall mast during the past few days. Are we to wait for another one on our very doorstep before the authorities take action about the radio beacon? The responsibility lies with them. It appears to be a grave one.

Early in the week K.L.M. had a stretcher case accompanied by a doctor from Croydon to Malmo by the 8.20 a.m. Scandinavian Air Express. Owing to the provision of the wrong sort of stretcher, the service was delayed for ten minutes. Just as it had departed a passenger for Malmo arrived, and as his business in Scandinavia was imperative, he was obliged to take a special aeroplane from Imperial Airways. The journey to Malmo cost him somewhere around £200 instead of about £12. A useful lesson in the virtue of punctuality when travelling by air! Imperial Airways were considerable gainers by the incident, and the Dutch company lost nothing, for no refund of passage money was due to the passenger.

A ridiculous and annoying statement in a daily newspaper last week was to the effect that Man Mohan Singh, chief pilot to the Maharaja of Patiala, was missing on his attempted record-breaking flight to Capetown. Both pilot and aeroplane were snugly housed at Croydon at the time of this "canard," as a ring on the telephone would easily have established. Such carelessness causes considerable alarm to friends and relatives, and is the more to be deplored because it is so easily avoidable.

An arrangement between Imperial Airways and the Dorchester Hotel resulted in plans for a number of the hotel guests seeing the New Year in from the air over London in an Imperial air liner. There was to be the popping of corks and "Auld Lang Syne" was to be sung.



Imperial Airways machine crashes in fog

WE regret to record the tragic news that on Saturday, December 30, an Avro 10, the *Apollo*, belonging to Imperial Airways, crashed in a fog at the wireless station of Ruysselede, Belgium, and the two pilots and eight passengers all lost their lives. The chief pilot was Mr. J. M. Gittins, and his assistant was Mr. H. G. Loch. The machine left Haren aerodrome, Brussels, at 12.20 p.m. bound for Croydon, and afterwards met heavy fog, which resulted in the pilot getting off his course. He sent a wireless message to Evere asking for his position, but before the answer could be received the machine hit either a cable or a pylon of the wireless station. The impact tore off part of one wing, and it broke the pylon off 250 feet above the ground. The machine nose-dived into the ground, and the impact must have killed all inside it. The staff of the wireless station rushed up and began to try to get the bodies out, but about two minutes later

Exactly how a dark-haired man was to step over the threshold on this occasion has not yet been revealed.

Mr. Thorne, the able manager of Imperial Airways' catering department, who is responsible for the good food and wines obtainable on board "Heracles" class liners, has left for a business tour of the Empire routes.

Several of the air traffic companies' freight department officials have heaved a sigh of relief now that the Christmas traffic of presents is over. These often contain small amounts of half-a-dozen dutiable commodities in one parcel, and are most troublesome to clear through Customs.

A. VIATOR.

FROM HESTON

AN interesting but rather unrehearsed test on the Comper "Mouse" took place at Heston on Christmas Eve. Flt. Lt. Comper and Mr. F. R. Walker were engaged in measuring speeds of the Comper "Mouse" with wheels retracted. At the conclusion of their tests a normal landing was made with wheels in landing position. A somewhat hastily installed telltale device showed the wheels locked home when in fact they were not properly secured, and to the occupants' astonishment the first contact with ground gave adequate proof of a sales point of really true value. Even when the wheels are retracted they will still revolve and carry the weight of the aircraft, so a perfect, though somewhat unconventional, three-point landing resulted (the third point being the exhaust manifold). Because this test was unexpected the airscrew had not been stopped, and this, therefore, was the only damage to be found. After this bad-mannered "Mouse" had been jacked up and a new airscrew fitted, it was quickly re-installed in its normal dignified and entirely serviceable condition for further flying tests. Two separate telltales are now fitted, and the few who saw this exploit appreciate that here is an aeroplane which in emergency may be landed on impossible surfaces without any chance of turning over on its back.

On December 22 the first all-British Klemm aircraft—the new "Swallow" type, fitted with a 75-h.p. geared Salmson engine—was demonstrated at Heston by Mr. Hordern, the test pilot of the British Klemm Aeroplane Co.

Capt. W. P. Crawford Greene and Lord Apsley, both Members of Parliament, returned from Australia on Tuesday after a charter flight lasting over two months, which, it will be remembered, started from Heston on October 9.

"Shine, Please!" may soon become a frequent request at the aerodromes, for the first chromium-plated registration letters have just been fitted to an aeroplane. On December 29 at Heston they were fixed on to the first production "Leopard Moth," which has just been delivered to Mr. Nigel Norman, Chairman of Airwork, Ltd. We look to our leading lights of the stage and screen for the first all-chromium-plated aeroplane, which would lend a literal turn to the sought-after status of a "Star."



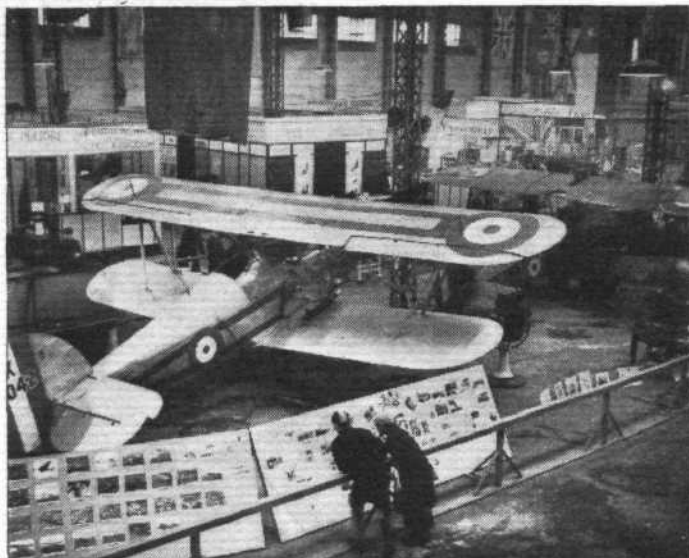
the petrol which had escaped from the burst tanks caught fire, and some of the rescuers were badly burned. The King sent a message of sympathy to Sir Eric Geddes, Chairman of Imperial Airways, to be conveyed to the relatives of the dead, and Lord Londonderry, Secretary of State for Air, also sent a telegram of sympathy from Aswan.

Southend shows the way

SOUTHEND TOWN COUNCIL appear to be the first to take action on the Prince of Wales' speech at the opening of the Airport Conference. The Council have agreed to purchase, for a sum of £20,000, a site of about 150 acres on which to develop a municipal airport. The site is about ten minutes by bus from the centre of the town, and will adjoin a proposed new by-pass. It is the site of an old wartime aerodrome and lies between the Club aerodrome and the town. The L.N.E.R. runs past it and the railway company propose to build a station for the new aerodrome.

SCHOOLBOYS' OWN EXHIBITION

IT is difficult for the adult mind, even though it possesses that rare asset which allows appreciation of childish things, to judge the merits of a schoolboys' exhibition. Adverse criticism is always easy and generally merely an expression of individual opinion, which in this case would be grossly unfair since the only opinion on the subject that is of any real value is the opinion of a schoolboy. The exhibition this year is being held at the White City from December 28 to January 13 under the Presidency of Sir Harry Brittain, K.B.E., C.M.G., LL.D. The adult mind dare go no further than to express the opinion that it might have been improved upon—for instance, it all seemed too commercial—however this would probably escape the notice of the average boy. The Air Section is the largest in the Exhibition, and has been arranged by the Air League of the British Empire. It certainly seems to arouse the most interest. Here is on view a Hawker "Fury," and those whose thirst for knowledge can overcome impatience may climb up to the cockpit and "see how the pilot did it all," as one small boy put it. One air enthusiast aged about 10 was heard by the writer explaining to his elderly escort that it was not the latest type of "Fury" because "the wings and struts were not quite right." The other machine on view is a Sopwith "Camel," but it did not appear to attract the same notice, the bright glimmers of youth outshining the memory of the veteran's past exploits. A large number of engines includes the 80 h.p. "Genet," the Napier "Lion," and a product of Rolls Royce. Imperial Airways are displaying some models of the machines used by them, including a Short "Kent" flying boat, a Handley Page 42W, and an Armstrong Whitworth XV, also some charming photographs of one or two of their senior pilots. Hamleys, of 200-202, Regent Street, are giving exhibition flights with their "Frog" models in a large netted-in enclosure, and apart from attracting a considerable amount of notice appeared to be doing quite a little business. Outside the aeronautical section the London Passenger Transport Board have on view a beautifully made model of presumed a London Suburb,



AT THE SCHOOLBOYS' EXHIBITION: One of the attractions was a Sopwith "Camel," used in the Great War, compared with a modern Hawker "Fury."

which is fortunate enough to possess two tube stations, one under the ground and one on the surface. There is a frequent service passing each station, and one admires the speed with which passengers are dropped and picked up. In conclusion, if there is anyone who doubts the scope of aeronautical knowledge tucked away inside the brain of the average boy of to-day, let him or her stand beside the "Fury" in the aeronautical section for half an hour with ears wide open. Incidentally his own education will have progressed a step further at the end of his vigil.

Demonstrating the Breguet 41-3

DIEUDONNE COSTE left Villacoublay on December 12 in a Breguet 41-3 twin-engined multi-seater fighter. He will demonstrate the machine in Central Europe and Turkey. The "41" is a most interesting aircraft; the only British type which can really be classed with it is the Boulton and Paul "Sidestrand," which we use in the R.A.F. as a day bomber. Although known as a fighter, the Breguet may be used for bombing and reconnaissance work. The tail is carried on a girder of small cross-section, as in the better-known type 27 machine. Besides reducing drag, this provides a very excellent field of fire for the rear guns. Three gun positions are provided, one in the nose for twin guns, and two behind the wings (one on top of the fuselage for twin guns, and one in the bottom of the fuselage for firing below the tail). The "41" has been fitted with a variety of engines—three different types of Hispano-Suizas and the new Gnome-Rhone 14 Kbrs. radials. Coste's machine has two Hispano-Suiza 12 x brs. When fitted with the Hispano 12 Ybrs. engines, which are similar in design to the "Y" type, the machine has a top speed of 194 m.p.h., and climbs to 13,120 ft. in 7 min. On December 14 Coste reached Athens, where he was met by one of the directors of the Breguet Company. On the way to Athens a halt was made at the Littorio Airport, Rome.

South African aero engine factory

It is reported that the Government of South Africa proposes to erect an aero-engine factory. A British firm may be given the contract.

Private Owners and Air Touring Committee

THE Private Owners and Air Touring Committee of the Royal Aero Club have approached the Air Ministry on the subject of the regulations recently introduced regarding flight in the vicinity of Croydon and on the London-Continent Airway during conditions of bad visibility. The deputation was received by Lt. Col. F. C. Shelmerdine, the Director of Civil Aviation, and suggestions were put forward to meet the difficulties which at present confront the private air tourists arriving from abroad in weather

conditions which necessitate the working of the "Croydon Controlled Zone."

"IngOclad"

A NEW structural material has recently been introduced in America which may have applications in aircraft construction. Known as "IngOclad," this new material may be said to be the steel "opposite number" of "Alclad," in that it is a ply material with an outer layer of stainless steel and an inner layer of mild steel. It is reported that "IngOclad" welds readily. The makers are the Ingersoll Steel & Disc Company.

Manchester office for George Salters

GEORGE SALTER & Co., of West Bromwich, manufacturers of Springs, Roller Bearings, Spring Balances, Weighing and Testing Machines, etc., have opened a branch office at the Chronicle Buildings, Corporation Street, Manchester. The firm hope that this new office will be of assistance to the trade in Manchester, Liverpool, Lancashire and Yorkshire. The chief representative at the office will be Mr. Albert Tonks, who is already well known to the trade in this part of the world.

Aero watches

If there is one thing that is absolutely essential to a pilot it is a reliable watch—for correct navigation even seconds have to be taken into account, and if a pilot's watch has the temerity to stop while he is flying from one place to another, blind or above clouds, he will be seriously handicapped. G. & M. Lane & Co., of 24-26, Ludgate Hill, London, E.C.4, have supplied both the Air Ministry and Imperial Airways with watches for some years, and that alone should be sufficient advertisement for their reliability. One of their products in particular is worthy of mention, the Aero Unbreakable Waterproof Watch. This watch can be thrown about in a most remarkable way and still remain intact, it was even dropped from a height of 2,000 ft. and then left to cool in the rain for over an hour without coming to any harm, which is really quite amazing. G. & M. Lane have a large selection of watches, and a visit to their shop in Ludgate Hill would be well worth while.

Correspondence

The Editor does not hold himself responsible for opinions expressed by correspondents. The names and addresses of the writers, not necessarily for publication, must in all cases accompany letters intended for insertion in these columns.

"IN ANOTHER PLACE."

[2902] In a world where the vast majority of newspapers are owned by people with axes to grind, it is pleasant to think that our technical journals may be honest, at least when making statements. Silence as a form of deceit is more or less permissible.

Your editorial last week, however, was as misleading as Lord Londonderry's own speech, for it, too, gave the erroneous impression that Britain had been the only nation to make any attempt to cut down air armaments. As far as my memory serves me, the total abolition of air armament has been advocated by Russia, Germany, and Spain. Italy made some small reservation, and the U.S. produced some suggestion which was tantamount to an abolition. Great Britain, whether we like the fact or not, has been one of the very few countries to stand out, and has, too, been obstructionistic in the matter of the internationalisation of civil aviation—whether this is feasible or not.

Even our most narrow-minded legal experts must agree that the will to disarm only stands between the world and peace.

Without suggesting that peace is desirable or that "patriotism" is a trained vice, I can still ask for honesty and give both devils and angels their due.

Manchester.

H. A. T.

December 19, 1933.

[We are very much obliged to our courteous correspondent for suggesting that FLIGHT is dishonest, though we cannot guess whether he would call that suggestion giving his due to a devil or to an angel. As for his arguments, they may do credit to the honesty of his heart, but they certainly do no credit to any more exalted part of his anatomy. He talks about "the erroneous impression that Britain had been the only nation to make any attempt to

cut down air armaments." Great Britain has not only made the attempt, but has actually cut them to the bone. How can any sane man believe that Russia's proposal to abolish all air armaments is more creditable than what Britain has done? Incidentally, Britain has also suggested "parity at zero," as Lord Londonderry said. If the internationalisation of civil flying is not feasible, how could it be a reproach if Britain did object to it? We are not "narrow-minded legal experts," but we certainly do not admit that "the will (? reluctance) to disarm, only, stands between the world and peace." We agree with Mr. Baldwin that disarmament by itself will not prevent wars.—Ed.]

EMPIRE AIR MAILS

[2903] In the face of many difficulties, mostly political, the air mail route to Australia has at last reached Singapore; the first airliner for Malaya left Croydon on December 9 with a heavy load.

In a few months the last section from Singapore to Australia will be open, and the most important air route in the world will be in operation.

Why not mark the completion of this great Imperial task by having all first-class mail matter leaving this country for Imperial destinations served by air mail carried by aeroplane instead of land transport?

In view of the enormous saving of time, few of the public would object to paying a higher postage rate providing that this rate was uniform, and providing that no special formalities were required, such as sticking on air mail labels.

The amount of traffic would probably allow of a daily despatch of mails between London and Cairo and from Cairo on alternate days to Australia and South Africa.

WALTER L. NAYLOR.

London, W.9.

December 13, 1933.



Book Reviews

By Air. By Sir Harry Brittain, K.B.E., C.M.G., LL.D., with an introduction by the Most Hon. the Marquess of Londonderry, K.G. (Hutchinson & Co., Ltd.) Obtainable from FLIGHT Office, 13s., post free.

THE British public has evidently grown more air-minded than one had suspected, and Sir Harry Brittain has gauged just what the said public wanted and has given it to them. The first edition of this book, we believe, was sold out almost before the print was dry on the pages. That is surely evidence enough of the public thirst for knowledge about the air, and evidence, too, of the author's good judgment.

It seems that what the public wanted to learn was just everything, everything about flying which is not technical, everything which has been recorded (technically perhaps) in the columns of FLIGHT week by week for years past. Sir Harry has gathered it all together and jotted it down in easy language, with an attractive style, and with 88 good photographs to illustrate it. The making of this book seems very simple, and the result is obviously very effective and successful. The author must be congratulated.

It follows that it is not easy to review such a book in a paper like FLIGHT. To the regular reader of an aeronautical paper it tells nothing that is new. Yet it is evidently just what the public has been wanting. There seems a lack of plan and method in the arrangement of the matter; but what plan can be better than the one

which brings success? It is perhaps the first comprehensive book on flying which can be called really popular.

A USEFUL INDEX

International Index to Aeronautical Technical Reports. Prepared by the Society of British Aircraft Constructors, Ltd., and published by the Royal Aeronautical Society. Obtainable from FLIGHT Office. Price 5s. 6d., post free.

SO vast has become the technical literature dealing with aeronautical subjects that the designer and student is often at a loss to know where to find what he wants. The S.B.A.C. and Royal Aeronautical Society have set out to remedy this state of affairs by issuing an International Index to Aeronautical Technical Reports. The title is slightly misleading in that the use of the word "Reports" indicates that the subjects indexed are official reports. This is not entirely the case, although in the nature of things the great majority of subjects indexed are official or semi-official reports of research institutions. But technical articles are included, and among them we are honoured to find some from THE AIRCRAFT ENGINEER (Monthly Technical Supplement to FLIGHT).

The Index is divided into two sections, of which the first deals with reports and articles in the English language (British and American), while the second is devoted to reports and articles in languages other than English.

The Index should prove very valuable to every designer and student of aeronautics.

Death of Lord Thomson's mother

MRS. THOMSON, the mother of Lord Thomson, who lost his life in the R.101 disaster, died at Teignmouth on December 27.

Wing Commander Shorten's death

WING COM. W. W. SHORTEN, R.A.F. Medical Service, who was stationed at Halton, was killed in a motor accident at Denham, Buckinghamshire, on December 27.



THE CURTISS "RAVEN": Showing the clean fuselage, retractable undercarriage, and cockpit hood, all of which help to give the "Raven" a top speed of about 200 m.p.h.

A MODERN AMERICAN OBSERVATION AIRCRAFT

The Curtiss "Raven" (Wright "Cyclone F")
developed for the U.S. Army Air Corps

THE observation aircraft, as such, does not exist in the R.A.F. The work of observation is performed chiefly by the Army Co-operation Squadrons, but our general purpose and day bomber machines (we are not concerning ourselves with Fleet aircraft) can do the work when necessary. America, about 1918, tried out some D.H.4's equipped as general purpose machines, but, unlike ourselves, abandoned this type and developed several specialised classes of aircraft, of which the "observation" machine is one. A modified D.H.4 was America's first choice for the work. This type was replaced by Curtiss "Falcons" (Curtiss D.12) and Douglas O.2 biplanes ("Liberty"). At present the U.S. Army Air Corps possesses quite a "mixed bag" of observation types, including the two last mentioned machines, Thomas Morse biplanes and Douglas high-wing monoplanes. Of the batch of new types being tried out, one, the Curtiss "Raven" (YO-40A), is of particular interest. Five "Ravens" have been ordered by the U.S. Army Air Corps for service tests.

The "Raven" is a sesquiplane with a very pronounced sweep back on the wings. The small lower plane gives the pilot and observer an excellent view forward and downward. The wings are of metal construction and are covered with fabric. Frise ailerons are used; these are fitted to the top plane only.

The fuselage is an all-metal monocoque structure. All the tail surfaces are of metal, the fin and tail plane being metal covered. Both rudder and elevator are covered with fabric and are fitted with Flettner balances. As may be seen from the photograph, the tandem cockpits are well sheltered for gunnery and observation work. The pilot is provided with a fixed machine gun and 200 rounds of ammunition. The gun is mounted in the top starboard plane and fires outside the periphery of the airscrew blades: this arrangement obviates the complications of

synchronising gear. The observer's gun is mounted on a special curved track round the rear of the cockpit. Five hundred rounds of ammunition are provided. Among the normal equipment carried by the "Raven" may be mentioned wireless transmitting and receiving apparatus, camera, observation flares and a Driggs-Faber signalling pistol. It has been reported by the U.S. Army Air Corps that the "Raven" has one of the best observers' cockpits ever developed.

Perhaps the most interesting feature of the "Raven" is the undercarriage. The wheels retract inward and upward near the junction of the lower planes with the fuselage. The pilot is informed of the position of the wheels by a system of signals. The complications of the retractor gear do not prohibit the use of brakes, which in this case are of the Bendix variety. The steerable tail wheel swivels through 360 deg.

The latest version of the "Raven" is fitted with a Wright "Cyclone F" engine of 700 h.p. which drives a three-bladed metal airscrew. The ring-type engine mounting is of welded-steel tubes. As in the case of large numbers of military aircraft, the "Raven" is fitted with a "droppable" petrol tank.

From time to time various modifications have been made to the "Raven," as, for example, alterations in the shape of the cockpit hooding and wheel fairings. Such changes, of course, will affect the performance of the machine. According to data issued in 1932, the top speed at sea level is 196 m.p.h., and 187 m.p.h. at 15,000 ft. The climb to 15,000 ft. takes 11 min., and the absolute ceiling is 26,800 ft. With normal fuel load the range is 230 miles, but the tankage may be increased to lengthen this to 430 miles.

Main dimensions of the "Raven" are as follow:—Span of top plane, 43 ft. 11 in.; overall length, 27 ft. 9 in., and wing area, 314 sq. ft.



The new Loening amphibian

WE have now received details of the Loening amphibian, of which an illustration was published in FLIGHT for December 21. The machine uses the same type of hull as the "Commuter," a well-tried aircraft about five years old. The biplane wing cellule of the "Commuter," however, has been replaced by a wooden monoplane wing (fabric covered) braced by tie rods attached to the engine mounting and the chine. Hydraulically-operated split trailing-edge flaps are fitted. So that these flaps may extend over as much of the span as possible, the ailerons are kept short in span and deep in chord. The ailerons are statically and aerodynamically balanced. The wing floats are carried on cantilever struts of very clean design. Unlike the "Commuter," the new machine has a rounded

after deck to its duralumin hull. The position of the engine has not been changed (the "Commuter" had a tractor airscrew in front of the pilots), but a Smith controllable-pitch metal airscrew is used. Hydraulically-operated wheel brakes are fitted to the wheels. The first machine of the type has been built for the personal use of Mr. Grover Loening; cabin accommodation for four is provided. Mr. Loening now intends to do sub-contract work for additional machines which may be ordered from existing aircraft companies. The main data applying to the new amphibian are as follows:—Weight empty, 3,100 lb.; useful load, 1,200 lb.; span, 42 ft.; wing area, 280 sq. ft.; gross weight in flying order, 4,300 lb.; wing loading, 15.37 lb./sq. ft., and power loading, 14.3 lb./h.p.; estimated speed (Wright "Whirlwind" J.6), 135 m.p.h.

THE ROYAL AIR FORCE

London Gazette, December 26, 1933

General Duties Branch

Lt.-Comdr. J. I. Robertson, R.N., is reattached to R.A.F. as Flight Lieut. with effect from Dec. 11, and with seniority of July 1, 1931; Wing Com. R. P. Willock is granted acting rank of Group Captain (Dec. 8); Wing Com. E. L. Tomkinson, D.S.O., A.F.C., ceases to be seconded as Air Adviser to the Greek Government and relinquishes the acting rank of Group Capt. (Dec. 1); Wing Com. E. L. Tomkinson, D.S.O., A.F.C., is placed on half-pay list, scale A (Dec. 1); Flt. Lt. A. E. Lindon, M.B.E., is placed on retired list (Dec. 25); the short service commn. of Acting P/O. on probation C. P. L. Nicholson is terminated on cessation of duty (Dec. 14).

Chaplains Branch

A. G. Kayll is granted a short service commn. with the relative rank of Sqdn. Ldr. with effect from and with seniority of Dec. 11.

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the Royal Air Force are notified:—

General Duties Branch

Wing Commander G. B. Dacre, D.S.O., to H.Q., Western Area, Andover, 18.12.33, for Personnel Staff duties.

Flight Lieutenants.—H. E. Nowell, to No. 43 (F.) Sqdn., Tangmere, 14.12.33; J. C. C. Slater, to H.M.S. *Courageous*, 18.12.33; F. P. Smythies, to R.A.F. Depot, Uxbridge, 16.12.33; E. F. Haylock, to H.Q., Iraq Command, Hinaidi, 15.12.33; F. F. Inglis, to H.Q., Iraq Command, Hinaidi, 15.12.33.

Flying Officers.—B. W. E. R. Bonsey, to Elec. & Wireless School, Cranwell, 17.12.33; R. B. Councill, to Central Flying School, Wittering, 18.12.33; D. J. Eays, to No. 504 (County of Nottingham) (B) Sqdn., Hucknall, 15.12.33; R. C. Jonas, to Central Flying School, Wittering, 18.12.33; A. N. Luxmoore, to Anti-Aircraft Co-operation Flight, Biggin Hill, 15.12.33.

Acting Pilot Officers.—R. J. F. Craig to No. 84 (B) Sqdn., Shaibah, Iraq, 21.11.33; C. H. D. Wardrop to No. 55 (B) Sqdn., Hinaidi, Iraq, 21.11.33; C. F. C. Wright to No. 55 (B) Sqdn., Hinaidi, Iraq, 21.11.33.

HALF-YEARLY PROMOTIONS

The Air Ministry announces: The following promotions are made with effect from January 1, 1934:—

General Duties Branch

Air Commodore to be Air Vice-Marshal.—Patrick Henry Lyon Playfair, C.B., M.C.

Group Captains to be Air Commodores.—Lawrence Arthur Pattinson, D.S.O., M.C., D.F.C., A.D.C.; William Lawrie Welsh, D.S.C., A.F.C.; John Tremayne Babington, D.S.O.

Wing Commanders to be Group Captains.—John Sowrey, A.F.C.; Robert Peel Willock; Lionel Thomas Nutcombe Gould, M.C.; John Benjamin Graham, M.C., A.F.C.

Squadron Leaders to be Wing Commanders.—Francis William Trott, O.B.E., M.C.; Frederick George Sherriff, M.C.; Charles Beauvoir Dalison, A.F.C.; William Samuel Caster, M.C.; Wilfred Henry Dunn, D.S.C.; Charles Langston Scott, D.S.C.; Hugh Henry MacLeod Fraser; Meredith Thomas, D.F.C., A.F.C.

Flight Lieutenant to be Squadron Leader.—Anthony Paul Colthurst (Lt.-Commander, R.N.).

Transfer of R.A.F. Officers to the Reserve

The undermentioned short-service, medium-service, and non-permanent officers should note that they become due, on the dates stated, for transfer to the reserve, or (where indicated) for relinquishment of commission, on completing their period of service on the active list:—

JUNE-JULY, 1934

General Duties Branch

Flight Lieutenants: Henry Charles Vincent Jolleff, John Harry Sender (June 30); Patrick John Bett, William Ewart Symonds (July 8); Geoffrey Denis Middleton, Cecil Hyatt Noble, Ardley George Pickering, A.F.C. (July 15)

Flying Officers: George Edward Agard-Butler, Norman Alexander, Francis Cecil Allen, Charles Abbott Ball, Guy Bearne, Noel John Capper, Christopher Hugh Glover, Douglas Charles Harrison, Francis John Baptist Keast, Douglas Wykeham Lydall, Ian Ludwig Steel McNicol, Herbert Gerard Joseph Purcell, John Main Waddell, George Elyton Sloan Williams, Sidney Noel Wiltshire (June 28); Edmund Hamon Bellairs, Arthur Courtenay Watson, Michael Watson (July).

Long Service and Good Conduct Medals—Awards

The Long Service and Good Conduct Medal has been awarded to the undermentioned airmen:—

W.O.'s Bradbury, E. J., McIntosh, L. A., Taylor, E. R. J., and Welsh, J. R., A.F.M.; S.M.'s: Neville, M., and Taylor, G. H.; S.M.2: Alford,

ROYAL AIR FORCE RESERVE RESERVE OF AIR FORCE OFFICERS

General Duties Branch

F/O. M. J. Creswell resigns his commn. (Dec. 10). The undermentioned Flying Officers relinquish their commns. on completion of service and are permitted to retain their rank (Dec. 23):—C. S. Clarke, T. Terrell, D.S.C.

SPECIAL RESERVE

General Duties Branch

The undermentioned are granted commns. as Pilot Officers on probation (Dec. 27):—F. F. Essam, A. J. Young.

AUXILIARY AIR FORCE

General Duties Branch

No. 600 (CITY OF LONDON) (BOMBER) SQUADRON.—P/O. the Hon. R. N. Frankland is promoted to rank of Flying Officer (Oct. 13).

No. 602 (CITY OF GLASGOW) (BOMBER) SQUADRON.—E. V. N. Bell is granted a commn. as Pilot Officer (Dec. 1).

Chaplains Branch

Rev. G. H. Collier, M.A., to H.Q., R.A.F., Halton, 14.12.33, for duty as Chaplain (C. of E.) vice Rev. J. R. Walkey, M.A.; Rev. C. R. Richardson to H.Q., R.A.F., Cranwell, 4.12.33, for duty as Chaplain (C. of E.) on appointment to a Short Service Commn.

NAVAL APPOINTMENTS

The following appointments have been made by the Admiralty:—
Lieut.-Com.—V. W. L. Proctor, lent to R.A.F. for observer and instructional duties at School of Naval Co-operation, Lee-on-Solent.

Lieut. (Flight Lieut., R.A.F.).—C. A. N. Hooper, to *Victory* for R.A.F. Base, Gosport, and to *Glorious* (January 15).

Lieuts. (Flying Officers, R.A.F.).—J. L. Hallowell, to *Courageous* for 821 Sqdn.; and W. J. Lucas, to *Victory* for R.A.F. Base, Gosport.

PROMOTION

Lieut. F. W. N. Bassett (Flying Officer, R.A.F.), to rank of Lieut.-Cdr. (seny. December 30, 1933).

Stores Branch

Squadron Leader to be Wing Commander.—Nevill Ross Fuller.

Accountant Branch

Wing Commander to be Group Captain.—Herbert John Down.

Squadron Leader to be Wing Commander.—Percy Arthur Simmons.

Flight Lieutenant to be Squadron Leader.—James Haddon Burleigh Carson.

Flying Officers to be Flight Lieutenants.—John MacLeod Murray, Claude Frederick Goatcher, Crystal Lorimer, Edward Smith.

Medical Branch

Group Captains to be Air Commodores.—Alfred William Iredell, M.R.C.S., L.R.C.P.; Albert Victor John Richardson, O.B.E., M.B., B.Ch., D.P.H.

W.H.; W.O.2's: Arnold, W., Allen E. W., Best, R., Barlow, A. E., Bradburn, S. A., Cornwell, S. J., Curtis, E. F., Coe, A. W., Ebert, A. V., Gee, F. P., Hatfield, J. E., Lewis, W. A., Lucas, P. E., Lovegrove, H., Markwick, L. G., Muir, A., Phillips, L., Sheppard, F. C., Stevens, F., Thomas, H. F., Woods, J., Williams, F.; S.M.2: Newman, E. G.; F/Sgt.'s: Ascoug, C., Abraham, B. J., Bailey, C. J., M.M., Burrows, B. E., Biddle, E., Childs, R., Cowley, C. E., Clifton, A. E., Chart, J., Cliffman, G., Fitzgerald, J. C., Fell, A., Faiers, G. W., M.M., Holden, H. E., Hammond, R. E., Holmes, W. H., Harris, C. E., Ireland, E., M.M., Lawson, T. R., Oatway, A. C., Paley, E. R., Porter, C. H. E., Sheward, S. L., Selby, E., Steadman, F. C., Savage, E., Saunders, W. C., Sharp, H. T., Smith, J., Vincent, H. E., Wicks, H. W.; Sgt.'s: Bailey, P. W., Branson, F. A., Crawley, F. T., M.M., Cooper, T., Collett, W., Champion, H., Collier, G. E., Denham, H. S., English, P. J., Hill, J. S., Jones, E., Pearsall, J. E., Russell, F. J., Richardson, A. J., Smith, D. M., Sippetts, W., Streeter, C., Talbot, R. H., Warren, E. J., Wills, F., Wright, J. S., Woodley, W. F., Whitburn, H., Walker, P. A., Young, C. J.; Cpl.'s: Anderson, G. S., Cowlard, A., Cheeseman, V., Clayton, W. H., Dunn, W., Graham, B., Hawkes, J. J., Jeffries, W. H., Linc, R. E., Moore, W. J., Miller, F. H., Morris, C. W. T., Mason, T. E., M.M., Philp, P. C., Pearson, N., Rivett, G. H., Sproat, J. S., Scott, A. B., Smith, J. J., Toal, J., Tuffield, A. A., Tooley, F. M., Vallis, T. H., Wilson, W. H., Womack, V.; Cpl. A./Sergt.'s: Amos, G. E., Grindley, E. A., C.G.M.; L.A.C.: Rudd, A.

Trade in China

A REPORT by Messrs. Louis Beale, commercial counselors at Shanghai and G. Clinton Pelham, commercial secretary at Hong Kong, on the Trade and Economic Conditions in China during the years 1931-33, has been published by the Department of Overseas Trade. A paragraph in it states that "It would appear probable that the United Kingdom's share of China's trade in all but capital goods will decline." Among the goods which this report states

will be required by China during the coming year is aircraft.

Air exercises statistics

STATISTICS just published show that during the last four years' Air Exercises nearly 10,000 hours' flying have been done, representing well over a million miles. Flying has been carried on by day and by night in all kinds of weather. About 1,500 engines have been involved and there has not been a single serious accident.



INTERESTING NEW ISSUES : On the left is the Dutch "Special Flight" (30 c.) in dark green, and next are three of the Egyptian International Aviation Congress issue—10 m. violet, 13 m. red and 20 m. blue. (FLIGHT Photo.)

AIR POST STAMPS

By DOUGLAS ARMSTRONG

(Editor of "Stamp Collecting")

Aviation Congress Stamp

According to custom, the meeting of the International Aviation Congress in Cairo last month was made the occasion of a special issue of stamps by the Egyptian post office in appropriate designs and inscribed with the title of the event in French and Arabic characters. The three vignettes, representing respectively an Imperial Airways liner passing over the Pyramids, a Dornier flying boat following the course of the Nile and the *Graf Zeppelin* sailing over the desert, are effectively reproduced in photogravure, constituting attractive souvenirs of the 1933 convention. These stamps were on sale for ten days only from December 20 to 30 last, and only one hundred thousand sets were printed and issued for the occasion. They comprise 5 milliemes yellow brown, 10 mils. violet, 13 mils. terra-cotta, 15 mils. dull purple, and 20 mils. bright blue, the total face value amounting to a trifle under 1s. 6d.

Air Mail Week in Nicaragua

With the object of fostering public patronage of the air mail service in the Central American Republic of Nicaragua, an international air mail week is organised each year. During this period distinctive stamps are provided for franking air-borne correspondence, as part of the general propaganda. The International Air Mail Week for 1933 took place between November 6 and 11, when stamps depicting the winged wheel of Icarus speeding over Lake Xolotlan were on sale in denominations 10 centavos brown, 15 c. violet, 25 c. red, and 50 c. blue, the issue being limited to 2,500 series.

Canada's Latest Air "Etiquette"

The latest development of the Canadian Airways system is a regular service to and from the newly discovered gold-fields of Ontario, where, in the absence of a government contract, letters are carried free of charge by the operating concern, which attaches a picturesque "sticker" printed in orange and green with a design of an aeroplane passing over a forest of fir trees, with the flying goose insignia in one corner and inscription "Special Air Mail Service." The label itself has, of course, no franking value and postage is prepaid in regular Canadian postage stamps in the ordinary way.

Holland—Java Air Mail

Misfortune befell the aeroplane carrying the Christmas air mail from Amsterdam to Batavia, consisting of some 50,000 letters bearing the special triangular air mail stamp shown in our illustration. The aeroplane, *Postjager*, which left Amsterdam on December 9, was forced down by engine trouble at Brindisi, and the mail had to be sent on by sea to Cairo, where it was picked up by one of the regular aeroplanes on the K.L.M. service, too late to reach the Dutch Indies in time for Christmas, however. It is understood that when repairs to the *Postjager* have been completed, she will proceed to Bandoeng and bring back the special mail which is awaiting her arrival. Letters carried on this flight will therefore have a special interest for collectors of "accident covers."

Another Air Stamp Record

An indication of the keen competition that exists among collectors for the scarcer varieties of air post stamps may be gathered from the fact that the highest figure realised by a single "lot" at the sale by auction in New York of the world-famous "Hind" collection of United States

stamps was \$12,000 for a mint block of four of the exceedingly rare 24 cents air mail stamp of 1918, showing the error "centre inverted." Generally speaking, the demand for air post stamps of every description has been well maintained during the past year, despite economic and financial difficulties, and stamp market experts predict an all-round rise in prices with the return of more favourable trade conditions and easier money in the near future.

West Indian Air Stamps

The neighbouring republics of the island of San Domingo have both indulged in new issues of air mail stamps in the latter part of 1933. For use on inland air mail letters in the Dominican Republic a supply of the regular 2 centavos postage stamp received the distinguishing imprint "Correo Aereo Interior," whilst in connection with the international air mail service a 10 centavos stamp, locally printed in deep blue with a vignette of a seaplane passing the Ozama fortress, was taken into use about the same time.

From the Black Republic of Haiti come two handsomely engraved air post stamps of 50 centimes orange and 1 gourde blue in a striking pictorial design showing an aeroplane flying over the ruins of the ancient Citadel of Port au Prince.

Air Stamps in Prospect

Every now and again there have been rumours of an impending issue of air mail stamps in Jugo-Slavia. Matters have now progressed so far that the subjects of the designs have been finally decided upon by a selection committee, so that the actual stamps may be expected to appear during the coming year, adorned with pictures of aeroplanes over local scenes, their respective face values being 50 paras, 1, 2, 3 and 10 dinars.

New issues of air stamps are also foreshadowed from the Belgian Congo, Liechtenstein and the Italian colonies.

NEW COMPANY REGISTERED

BRITISH PROCESSES SYNDICATE, LTD., 355, Bank Chambers, 329, High Holborn, W.C.1.—Capital £5 in 1s. shares. Objects:—To acquire interests in inventions relating to anodising, treating or colouring aluminium and aluminium alloys and castings, by electrolysis or any other method, etc. Directors:—William F. Harkness, 329, High Holborn, W.C.1 (director of Domestic Appliances, Ltd.); James Horsfall, 43, Fitz James Avenue, Kensington, W.14, aeronautical engineer; John M. Richard, 39, Holborn Viaduct, E.C.1, electrical engineer; Sidney R. Sheppard, Woodfield, Lynwood Road, Redhill, chemist; Paul J. White, 56, Clifton Court, N.W.8, merchant.

PATENT AERONAUTICAL SPECIFICATIONS

Abbreviations: Cyl. = cylinder; i.c. = internal combustion; m. = motors (The numbers in brackets are those under which the Specification will be printed and abridged, etc.)

APPLIED FOR IN 1932

Published January 4, 1934

- 12,827. BENDIX AVIATION CORPORATION. Choke control for carburettors. (402,763.)
- 15,491. C. CHURCHILL & Co., LTD., and F. C. CLEMENSON. Machines for milling and/or grinding propeller blades. (402,768.)
- 16,543. VICKERS (AVIATION), LTD., and T. S. DUNCAN. Braking systems for aircraft. (402,833.)
- 22,389. I. BOWEN. Cameras for use on aircraft. (402,890.)
- 23,286. R. H. MAYO. Means for launching aircraft. (402,895.)
- 35,243. K. ASANO. Devices for testing aeroplanes. (402,939.)
- 36,329. FAIRLEY AVIATION CO. LTD. D. L. H. WILLIAMS and F. H. ORDDIDGE. Means for actuating servo-operating controlling-surfaces. (402,941.)

APPLIED FOR IN 1933

Published January 4, 1934

- 1,311. R. H. MAYO. Means for launching aircraft. (402,951.)
- 11,744. J. L. M. O. DE CHAPPEDELAINE. Aeroplanes with rotatable wings. (402,992.)
- 12,310. R. H. MAYO. Composite aircraft. (402,997)